

# **AT831b** MINIATURE CARDIOID CONDENSER MICROPHONE

# BROADCAST & PRODUCTION

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MICROPHONES



- Clip-on lavalier mic provides crisp, full-sounding voice pickup
  - Also excels as an instrument mic, especially for pickup of acoustic guitar with included AT8444 instrument adapter
  - Excellent gain before feedback and suppression of background noise
  - UniSteep® filter provides a steep low-frequency attenuation to improve sound pickup without affecting voice quality
  - Operates on battery or phantom power

For use as a lavalier, attach the microphone about six inches below the chin. Anticipate movements that may cause the microphone to rub against or be covered by clothing, and position the microphone to avoid it.

The AT831b requires 11-52V DC phantom power, or a 1.5V AA battery for operation. A battery need not be in place for phantom power operation.

**Battery installation:** Remove the cap from the top of the power module. Insert a fresh 1.5V AA battery ("+" end toward the cap release button), then reassemble the power module. Alkaline batteries are recommended for longest life. Remove the battery during long-term storage.

Output from the power module's XLRM-type connector is low impedance (Lo-Z) balanced. The signal appears across Pins 2 and 3; Pin 1 is ground (shield). Output phase is "Pin 2 hot" — positive acoustic pressure produces positive voltage at Pin 2.

To avoid phase cancellation and poor sound, all mic cables must be wired consistently: Pin 1-to-Pin 1, etc.

An integral 80 Hz high-pass UniSteep® filter provides easy switching from a flat frequency response to a low-end roll-off. The roll-off position reduces the microphone's sensitivity to popping in close vocal use. It also reduces the pickup of low-frequency ambient noise (such as traffic, air-handling systems, etc.), room reverberation and mechanically coupled vibrations.

The microphone is RoHS compliant—free from all substances specified in the EU directive on hazardous substances.

Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110° F (43° C) for extended periods. Extremely high humidity should also be avoided.

## AT831b SPECIFICATIONS<sup>†</sup>

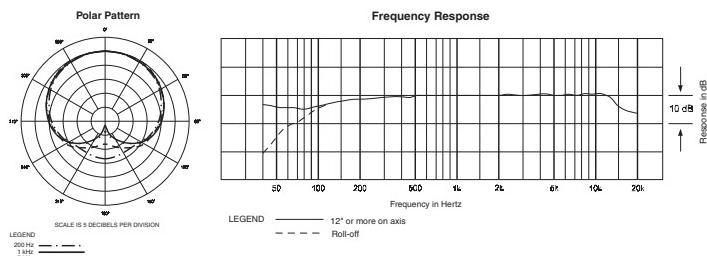
<b>ELEMENT</b>	Fixed-charge back plate permanently polarized condenser
<b>POLAR PATTERN</b>	Cardioid
<b>FREQUENCY RESPONSE</b>	40-18,000 Hz
<b>LOW FREQUENCY ROLL-OFF</b>	80 Hz, 18 dB/octave
<b>OPEN CIRCUIT SENSITIVITY</b> (Phantom / Battery)	-44 dB (6.3 mV) / -46 dB (5.0 mV) re 1V at 1 Pa*
<b>IMPEDANCE</b> (Phantom / Battery)	200 ohms / 270 ohms
<b>MAXIMUM INPUT SOUND LEVEL</b> (Phantom / Battery)	135 dB / 121 dB SPL, 1 kHz at 1% T.H.D.
<b>DYNAMIC RANGE</b> (typical) (Phantom / Battery)	106 dB / 92 dB, 1 kHz at Max SPL
<b>SIGNAL-TO-NOISE RATIO<sup>1</sup></b>	65 dB, 1 kHz at 1 Pa*
<b>PHANTOM POWER REQUIREMENTS</b>	11-52V DC, 2 mA typical
<b>BATTERY TYPE</b>	1.5V AA/UM3
<b>BATTERY CURRENT / LIFE</b>	0.4 mA / 1200 hours typical (alkaline)
<b>SWITCH</b>	Off, on-flat, on-roll-off
<b>WEIGHT</b> (less cable and accessories)	
<b>MICROPHONE</b>	2.8 g (0.1 oz)
<b>POWER MODULE</b>	139 g (4.9 oz)
<b>DIMENSIONS</b>	
<b>MICROPHONE</b>	25.0 mm (0.98") long, 10.2 mm (0.40") diameter
<b>POWER MODULE</b>	84.0 mm (3.31") H x 63.0 mm (2.48") W x 22.0 mm (0.87") D
<b>OUTPUT CONNECTOR</b> (power module)	Integral 3-pin XLRM-type
<b>CABLE</b>	1.8 m (6') long (permanently attached to microphone), 2.6 mm ( 0.10") diameter, 2-conductor, shielded cable with TA3F-type connector
<b>ACCESSORIES FURNISHED</b>	AT8531 power module; AT8417 clothing clip; AT8444 instrument adapter; AT8116 windscreens; battery; protective carrying case

<sup>†</sup>In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

\*1 Pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL

<sup>1</sup> Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.



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